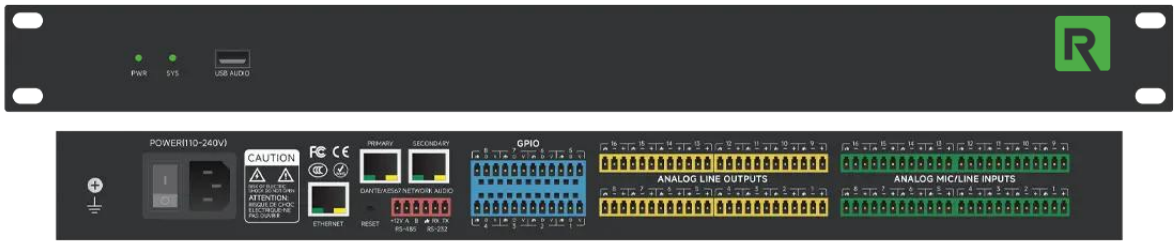
RESOUNDIFY

# AurisPro-1616D

## Advanced Audio DSP with Dante & AEC/ANC Support 16X16, Dante 16*16




## PRODUCT OVERVIEW

The **Resoundify** AurisPro-1616D is a flagship-grade 16x16 Advanced Audio Digital Signal Processor (DSP) designed for large-scale, mission-critical AV installations. Powered by the ADI SHARC DSP platform, it delivers robust performance, ultra-low latency, and professional-grade audio processing. With 16 balanced analog inputs and 16 balanced outputs, plus 16x16 Dante™ audio networking, this system is built for high-capacity audio routing and processing.

Ideal for enterprise-level applications, the AurisPro-1616D includes full-duplex AEC (Acoustic Echo Cancellation) and ANC (Automatic Noise Cancellation) on all mic inputs, ensuring crystal-clear communication in challenging acoustic environments. It also features intelligent auto mixing, feedback suppression, gain sharing, and ambient noise compensation—making it a complete solution for conferencing, courtrooms, broadcast studios, and more.

## KEY FEATURES

- **Professional SHARC DSP Core:** Delivers powerful processing using Analog Devices' renowned SHARC platform, ensuring low-latency performance and customization potential.
- **High-Quality Audio Processing:** 24-bit/48kHz audio resolution ensures crystal-clear sound quality across all channels.
- **Intelligent Feedback Suppression:** Adaptive per-channel feedback elimination for consistent, interference-free audio.
- **Full-Duplex AEC & ANC:** Integrated Adaptive Echo Cancellation and Active Noise Cancellation per channel for flawless communication.
- **Auto Mixer & Gain Control:** Features Gain Sharing Auto Mixer, AGC, and Ducker for smooth level balancing in real-time.
- **Ambient Noise Compensation:** Dynamically adjusts levels based on background noise fluctuations.
- **Comprehensive Audio Matrix:** Fully configurable 16x16 routing matrix with input duplication, grouping, level, and mute control.
- **Expandable Control Options:** 8 configurable GPIOs (input/output/ADC), RS-232 & UDP support with assignable ports for central control systems.
- **Multi-Platform Compatibility:** Supports both iOS and Windows OS with dual USB audio interface for recording and conferencing.
- **Dual Power Support:** Operates on PoE or DC 12V for flexible power deployment.

## APPLICATIONS

- Boardrooms
- Classrooms
- Auditorium

# TECHNICAL SPECIFICATIONS

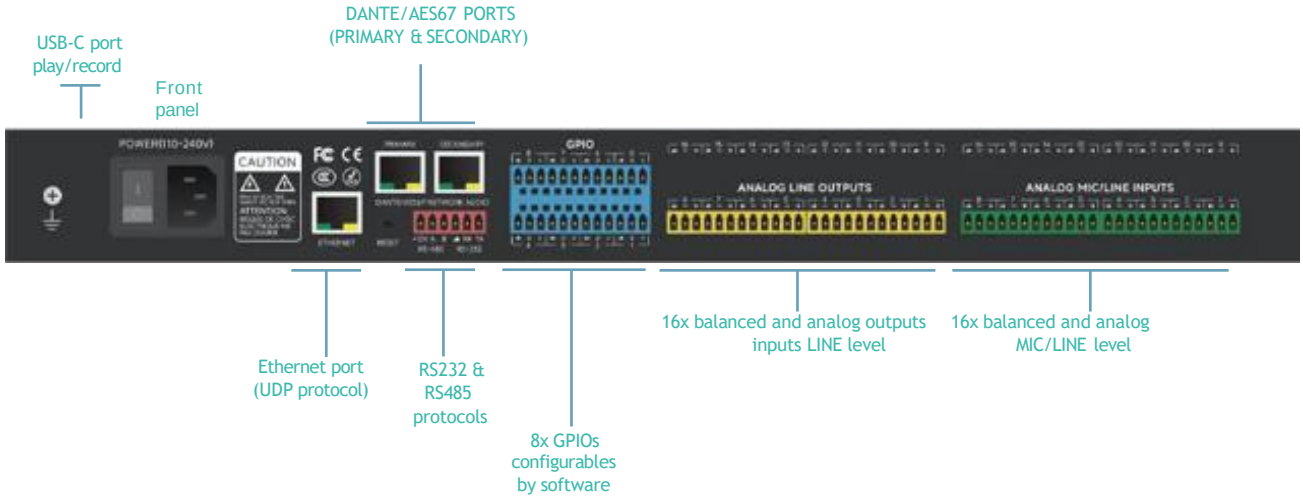
## System Specifications

| | |
|---|---|
| Processor | ADI SHARC 21489@450 MHz SIMDx2 |
| Raw Processing Capacity | 400 MIPS, 1.6 GFLOPS |
| Sampling Rate | 48 kHz ± 100 ppm |
| Frequency Response (A/D/A) | 20 Hz – 20 kHz ± 0.5 dB |
| Dynamic Range (A/D/A) | 114 dB (A-weighted) |
| THD + Noise | < -95 dB (22.4 kHz BW, unweighted); 1 kHz @ +17 dBu, 0 dB gain |
| Channel Separation (A/D/A) | 110 dB @ 1 kHz, +24 dBu |
| Latency (A/D/A) | 1.04 ms (input routed directly to output) |
| Delay Memory | 174 mono seconds |
| Analog Control Inputs | 0-3.3 VDC |
| Recommended External Control Potentiometer | 10k Ohm, linear taper |
| Logic Outputs | Low (0 V) when active Pulled high (5 V) when inactive |
| Logic Output Maximum External Power Supply / Current Sinking | 24 VDC / 50 mA |
| Logic Output Maximum Output Current | 10 mA |
| RS-232 Accessory Serial I/O | 57.6 kbps (default), 8 data bits, 1 stop bit, no parity, Straight-through wiring; pins 2, 3, 5 used |
| Ethernet Cable | Standard CAT5/6, max 100 m (328 ft) |
| Maximum Stored Presets | 1,000 storable presets |

## Analog Inputs and Outputs

| | |
|---|---|
| Number of Analog Inputs | 16 switchable balanced mic or line level |
| Analog Input and output Connectors | 3.81 mm terminal blocks |
| Nominal Analog Input and output Level | +4 dBu with 20 dB headroom |
| Analog Input and output Maximum Level | +24 dBu (or +22.8 dBu into a 2k Ohm minimum load) |
| Analog Mic Pre-amp Gain | 0 to 51 dB (in 3 dB steps) with ±24 dB digital trim |
| Analog Mic Pre-amp EIN | < -125 dB (with 150 Ohm source, 22.4 kHz BW) |
| Analog Input Impedance | 2k Ohms balanced, 1k Ohms unbalanced |
| Analog Phantom Power (per input) | +48 VDC per input, max 10 mA |
| Analog Input Dynamic Range | >115 dB, A-weighted |
| Analog Input THD + Noise | <-100 dB (22.4 kHz BW, unweighted), 1 kHz @ +15 dBu, 0 dB gain |
| Analog Input Latency | 0.31 ms |
| Number of Analog Outputs | 16 balanced line level |
| Analog Output Impedance | 300 Ohms balanced, 150 Ohms unbalanced |
| Analog Output Dynamic Range | 117 dB, A-weighted |
| Analog Output THD + Noise | < -97 dB (22.4 kHz BW, unweighted); 1 kHz, 0 dB gain, +8 dBu output |
| Analog Output Latency | 0.31 ms |

## Rear View




## Control Software

AuriControl+ is our dedicated configuration software, available for free download from our official website. Designed with a user-friendly interface, it allows fine-tunusers to easily tailor the matrix settings to match the specific needs of any installation. With this software, you can e a wide range of parameters, including:

- Input gain
- Expander
- Compressor & Limiter
- Auto Gain Control (AGC)
- Equalizer
- Figure Balancer
- Active Noise Control (ANC)
- Feedback (AFC)
- Noise gate
- Ducker
- SPL
- Share AM (Automixer)
- Echo Canceller (AEC)
- Camera Tracking
- Noise Suppresion (ANS)
- Matrix
- Low & High Pass filters
- Delayer
- Output